

CLAIMS

What is claimed is:

1. A method for integrating a plurality of content repositories into a virtual content repository (VCR), comprising:

providing credential information to each one of said plurality of content repositories;

receiving authorization information from each one of said plurality of content repositories, wherein the authorization information indicates whether or not an authorization procedure succeeded;

integrating into the VCR each one of said plurality of content repositories whose authorization information indicates successful authorization; and

wherein each one of said plurality of content repositories exposes a first set of services to enable its integration into the VCR.

2. The method of claim 1 wherein:

the credential information includes a username and a password.

3. The method of claim 1 wherein:

the credential information is based on Java Authentication and Authorization Service (JAAS).

4. The method of claim 1 wherein:

the first set of services accepts the credential information.

5. The method of claim 1 wherein:

the first set of services provides the authorization information.

6. The method of claim 1 wherein:

each one of said plurality of content repositories exposes a second set of services that is related to implementing a model of information in the content repository; and

wherein the model is compatible with a VCR content model.

7. The method of claim 1, further comprising:
providing a VCR content model; and
wherein each one of said plurality of content repositories exposes a second set of services related to extending the VCR content model to include information in the content repository.
8. The method of claim 1, wherein integrating into the VCR each one of said plurality of content repositories includes:
providing a hierarchical namespace spanning said plurality of content repositories.
9. The method of claim 1, wherein integrating into the VCR each one of said plurality of content repositories includes:
providing a content model related to representing content in each one of said plurality of content repositories.
10. The method of claim 1, wherein integrating into the VCR each one of said plurality of content repositories includes:
providing for mapping of requests on the VCR to one of said plurality of repositories.
11. A method for integrating a plurality of content repositories into a virtual content repository (VCR), comprising:
authorizing each one of said plurality of content repositories;
incorporating each one of said plurality of content repositories into a hierarchical namespace;
extending a content model to include content from each one of said plurality of content repositories; and
wherein each one of said plurality of content repositories exposes a first set of services to enable its integration into the VCR.
12. The method of claim 11 wherein authorization comprises:
providing credential information to each of said plurality of content repositories; and

receiving authorization information from each of said plurality of content repositories.

13. The method of claim 12 wherein:
the credential information includes a username and a password.
14. The method of claim 12 wherein:
the credential information is based on Java Authentication and Authorization Service (JAAS).
15. The method of claim 12 wherein:
the first set of services accepts the credential information.
16. The method of claim 12 wherein:
the first set of services provides the authorization information.
17. The method of claim 11 wherein:
each one of said plurality of content repositories exposes a second set of services that is related to implementing the content model.
18. The method of claim 11, further comprising:
providing for mapping of requests on the VCR to one of the plurality of repositories.
19. The method of claim 11 wherein incorporating each one of said plurality of content repositories into the hierarchical namespace comprises:
providing for content in each of said plurality of content repositories:
 - 1) a first identifier that uniquely identifies the content within one of said plurality of content repositories; and
 - 2) a second identifier that uniquely identifies the content within the namespace.
20. The method of claim 19, further comprising:
providing for mapping of requests on content to one of said plurality of

repositories; and

wherein the mapping is based on at least one of: 1) the first identifier associated with the content; and 2) the second identifier associated with the content.

21. A method of organizing content stored in a plurality of content repositories into a virtual content repository (VCR) namespace wherein said content is represented by at least one node, said method comprising:

providing a first identifier that uniquely identifies said at least one node within one of said plurality of content repositories;

providing a second identifier that uniquely identifies said at least one node within said namespace;

wherein the namespace is hierarchical and spans said plurality of content repositories; and

wherein each one of said plurality of content repositories exposes a set of services to enable its integration into a virtual content repository (VCR).

22. The method of claim 21 wherein:
the second identifier is a path.

23. The method of claim 21 wherein:
the VCR represents said plurality of content repositories as a single repository.

24. The method of claim 21 wherein:
said at least one node is associated with at least one property.

25. The method of claim 24 wherein:
a property is an association between a name and at least one value.

26. The method of claim 24 wherein:
said at least one property is associated with at least one property definition.

27. The method of claim 26 wherein:
a property definition can specify for a property at least one of the following attributes:

property choices;
 a reference;
 a data type;
 whether the property is mandatory;
 whether the property is multi-valued;
 whether the property is primary;
 whether the property is read-only; and
 whether the property is restricted.

28. The method of claim 26 wherein:
 there is one property definition for each property associated with said at least one node.
29. The method of claim 21 wherein:
 said at least one node can be hierarchically related to other nodes in the VCR.
30. A system comprising:
 means for authorizing each one of said plurality of content repositories;
 means for incorporating each one of said plurality of content repositories into a hierarchical namespace;
 means for extending a content model to include content from each one of said plurality of content repositories; and
 wherein each one of said plurality of content repositories exposes a first set of services to enable its integration into the VCR.
31. The system of claim 30 wherein authorization comprises:
 means for providing credential information to each of said plurality of content repositories; and
 means for receiving authorization information from each of said plurality of content repositories.
32. The system of claim 31 wherein:
 the credential information includes a username and a password.

33. The system of claim 31 wherein:
the credential information is based on Java Authentication and Authorization Service (JAAS).
34. The system of claim 31 wherein:
the first set of services accepts the credential information.
35. The system of claim 31 wherein:
the first set of services provides the authorization information.
36. The system of claim 30 wherein:
each one of said plurality of content repositories exposes a second set of services that is related to implementing the content model.
37. The system of claim 30, further comprising:
means for providing mapping of requests on the VCR to one of the plurality of repositories.
38. The system of claim 30 wherein incorporating each one of said plurality of content repositories into the hierarchical namespace comprises:
means for providing for content in each of said plurality of content repositories:
1) a first identifier that uniquely identifies the content within one of said plurality of content repositories; and
2) a second identifier that uniquely identifies the content within the namespace.
39. The system of claim 38, further comprising:
providing for mapping of requests on content to one of said plurality of repositories; and
wherein the mapping is based on at least one of: 1) the first identifier associated with the content; and 2) the second identifier associated with the content.
40. A machine readable medium having instructions stored thereon that when

executed by a processor cause a system to:

authorize each one of said plurality of content repositories;

incorporate each one of said plurality of content repositories into a hierarchical namespace;

extend a content model to include content from each one of said plurality of content repositories; and

wherein each one of said plurality of content repositories exposes a first set of services to enable its integration into the VCR.

41. The machine readable medium of claim 40, further comprising instructions that when executed cause the system to:

provide credential information to each of said plurality of content repositories;

and

receive authorization information from each of said plurality of content repositories.

42. The machine readable medium of claim 41 wherein:

the credential information includes a username and a password.

43. The machine readable medium of claim 41 wherein:

the credential information is based on Java Authentication and Authorization Service (JAAS).

44. The machine readable medium of claim 41 wherein:

the first set of services accepts the credential information.

45. The machine readable medium of claim 41 wherein:

the first set of services provides the authorization information.

46. The machine readable medium of claim 40 wherein:

each one of said plurality of content repositories exposes a second set of services that is related to implementing the content model.

47. The machine readable medium of claim 40, further comprising instructions

that when executed cause the system to:

provide for mapping of requests on the VCR to one of the plurality of repositories.

48. The machine readable medium of claim 40, further comprising instructions that when executed cause the system to:

provide for content in each of said plurality of content repositories:

1) a first identifier that uniquely identifies the content within one of said plurality of content repositories; and

2) a second identifier that uniquely identifies the content within the namespace.

49. The machine readable medium of claim 48, further comprising instructions that when executed cause the system to:

provide for mapping of requests on content to one of said plurality of repositories; and

wherein the mapping is based on at least one of: 1) the first identifier associated with the content; and 2) the second identifier associated with the content.

50. A computer data signal embodied in a transmission medium, comprising:

a code segment including instructions to authorize each one of said plurality of content repositories;

a code segment including instructions to incorporate each one of said plurality of content repositories into a hierarchical namespace;

a code segment including instructions to extend a content model to include content from each one of said plurality of content repositories; and

wherein each one of said plurality of content repositories exposes a first set of services to enable its integration into the VCR.

51. The computer data signal of claim 50 wherein authorization comprises:

a code segment including instructions to provide credential information to each of said plurality of content repositories; and

receiving authorization information from each of said plurality of content repositories.

52. The computer data signal of claim 51 wherein:
the credential information includes a username and a password.
53. The computer data signal of claim 51 wherein:
the credential information is based on Java Authentication and Authorization Service (JAAS).
54. The computer data signal of claim 51 wherein:
the first set of services accepts the credential information.
55. The computer data signal of claim 51 wherein:
the first set of services provides the authorization information.
56. The computer data signal of claim 50 wherein:
each one of said plurality of content repositories exposes a second set of services that is related to implementing the content model.
57. The computer data signal of claim 50, further comprising:
a code segment including instructions to provide for mapping of requests on the VCR to one of the plurality of repositories.
58. The computer data signal of claim 50, further comprising:
a code segment including instructions to provide for content in each of said plurality of content repositories:
1) a first identifier that uniquely identifies the content within one of said plurality of content repositories; and
2) a second identifier that uniquely identifies the content within the namespace.
59. The computer data signal of claim 58, further comprising:
a code segment including instructions to provide for mapping of requests on content to one of said plurality of repositories; and
wherein the mapping is based on at least one of: 1) the first identifier

associated with the content; and 2) the second identifier associated with the content.